

24. (New) The method of Claim 23, wherein the hydroxide is present in an amount of about 0.5 to about 10 weight percent on a water-free basis.

A<sup>2</sup>  
25. (New) The method of Claim 10, wherein the sodium hydroxide is present in an amount of less than about 30 weight percent on a water-free basis.

26. (New) The method of Claim 25, wherein the sodium hydroxide is present in an amount of about 0.5 to about 10 weight percent on a water-free basis.

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#### REMARKS

Reexamination and reconsideration of this Application, withdrawal of the rejection, and formal notification of the allowability of all claims as now presented are earnestly solicited in light of the above amendments and remarks which follow.

Claims 1-26 are pending in the application. Claim 1 has been amended herein. Claims 15-26 have been added. Support for the claim amendment and new claims may be found throughout the specification, and particularly in the original claims and on pages 2-6.

Claims 1, 9, and 13 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,112,754 to Diaz. The Office Action alleges that the Diaz reference discloses a method of making a tobacco substitute that may be deposited on a tobacco leaf, the method including applying caramelized sucrose in an amount of 8.2 – 40.3 parts by weight. Applicants respectfully traverse this rejection.

The Diaz reference is directed to a method of making a tobacco substitute that may be applied to a fibrous medium. The tobacco substitute comprises a suspension medium comprising a number of ingredients including water, fruit juices or extracts, calcium carbonate, caramelized sucrose, and other aromatic substances. The Diaz reference specifies that the sucrose is caramelized in a dry vessel prior to adding the caramelized sucrose to the remaining suspension ingredients (column 3, lines 66-70).

In contrast, the present invention is directed to a method for improving the flavor and aroma characters of a smoking article by subjecting a mixture to a heat treatment for a time and under conditions sufficient to produce a flavorful caramel composition. All of the pending claims recite heat treatment of either an aqueous mixture or a mixture consisting essentially of a reducing sugar and a hydroxide of an alkali metal. As admitted in the Office Action, the Diaz reference is entirely silent as to the formation of a mixture of a reducing sugar and a hydroxide. The Diaz reference also fails to teach or suggest amended Claim 1, which now requires heat treatment of an aqueous mixture of a reducing sugar. As noted above, the Diaz reference clearly teaches that the sucrose is caramelized in a dry vessel before addition of the caramelized sucrose to the aqueous suspension taught therein.

Further, Applicants note that, contrary to assertions made in the Office Action, the Diaz reference does not teach the step recited in Claim 9. Specifically, the Diaz reference fails to suggest applying a flavorful composition in an amount from about 5% to about 8% by weight based on the total dry weight of the tobacco leaf or cut filler. Instead, the amounts mentioned in the Office Action refer to the weight percentage of the caramelized sucrose in the suspension medium, not the amount applied to the fibrous medium. In light of the foregoing, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 2-3, 10, 12, and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of the above-described Diaz reference in view of U.S. Patent No. 3,622,343 to Anwar *et al.* The Office Action notes that the Diaz reference is silent as to the addition of a hydroxide, but relies upon the Anwar reference as disclosing that caramel may be formed by heating a material such as sucrose in the presence of sodium hydroxide. The Office Action takes the position that it would have been obvious to modify the caramelization process of Diaz to include the addition of sodium hydroxide based on the teachings of Anwar. Applicants respectfully traverse this rejection.

Applicants respectfully submit that one of ordinary skill would have no motivation to combine the Anwar and Diaz references as contemplated in the Office Action. As noted above, the Diaz reference is directed to the formation of a tobacco substitute in the form of a suspension

medium that may be applied to a fibrous material, such as a tobacco leaf. The Anwar reference is not directed to additives for tobacco at all. Instead, the Anwar reference is directed to an emulsified flavoring oil additive for flavored beverages. There is no suggestion in the Anwar reference that the caramel described therein would be suitable for use in a tobacco substitute. Further, there is nothing in the Anwar reference to lead one of ordinary skill in the art to believe that the materials mentioned in the Anwar reference as possible additives to the sugar used to form caramel would be suitable for tobacco applications. In light of these clear differences between the two references, Applicants respectfully submit that one of ordinary skill in the art would not combine the references as noted in the Office Action and request reconsideration and withdrawal of this rejection.

Even if the two references are properly combinable, which Applicants do not admit, the combination would still fail to teach or suggest the present invention. As noted above, independent Claim 1 has been amended to recite that the mixture that is subjected to heat treatment is in aqueous form. By reciting the use of a dry vessel, the Diaz reference teaches away from the use of an aqueous mixture during the caramelization process. There would be no motivation to modify the Diaz process in a manner inconsistent with the express teachings thereof. Further, the Anwar reference does not mention the use of an aqueous mixture during caramelization. Although the reference states that commercial caramel is available as an aqueous solution, there is no description of the nature of the material during heat treatment. Thus, even if combined, the two references fail to teach or suggest amended Claim 1.

Independent Claims 10 and 15 require subjecting a mixture consisting essentially of reducing sugar and a hydroxide to heat treatment in order to produce a caramel composition. Contrary to assertions made in the Office Action, Applicants respectfully submit that no motivation exists to modify the Diaz reference because the Diaz reference is quite specific about the reaction conditions during caramelization. The reference requires a dry vessel, which seems to weigh against inclusion of any other ingredients, particularly those ingredients that would typically be added in aqueous form. In particular, it would be entirely speculative to state that the combination of Diaz and Anwar would result in the specific hydroxide concentrations recited in

new Claims 21-26. Thus, Applicants respectfully request reconsideration and withdrawal of this rejection, as well as any other rejection relying on the combination of the Diaz and Anwar references.

Claims 4-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the above-described Diaz reference in view of the Encyclopedia of Food Science, Food Technology and Nutrition (EFSFTN). Similarly, Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over a combination of the above-described Diaz, Anwar, and EFSFTN references. Although noting that the Diaz reference does not specifically disclose fructose, the Office Action relies upon the EFSFTN reference as disclosing fructose as a source for the manufacture of caramel. Additionally, the Office Action relies upon the EFSFTN as disclosing a heat treatment temperature of 180-250°C, the use of enhanced pressure, and the relationship between the color of the caramelized product and the time of the process. Applicants respectfully traverse these rejections.

As noted above, Claims 4-8 now require heat treatment of an aqueous mixture. As further noted above, the Diaz reference teaches away from the use of an aqueous mixture during caramelization and, in fact, specifies a dry vessel. Thus, there would be no motivation to alter the teachings of the Diaz reference to include caramelization of an aqueous mixture. As a result, Applicants respectfully request reconsideration and withdrawal of this rejection as applied to Claims 4-8.

Regarding Claim 11, Applicants again note that one of ordinary skill in the art would have no motivation to combine the Diaz and Anwar references as contemplated in the Office Action because the Diaz reference clearly only contemplates caramelizing sucrose alone in a dry vessel. Since the Anwar reference is only directed to additives for food beverages and never suggest that the caramel described therein would be suitable as a tobacco substitute, one of ordinary skill in the art would have no motivation to modify the teachings of the Diaz reference to include a hydroxide in a mixture to be caramelized. Since the rejection of Claim 11 requires this same combination of Diaz and Anwar, Applicants respectfully request reconsideration and withdrawal of this rejection as well.

In re: Dube et al.

Appl. No.: 09/624,820

Filed: July 25, 2000

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Accordingly, it is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all pending claims are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned should the Examiner have any comments or suggestions in order to expedite examination of this case.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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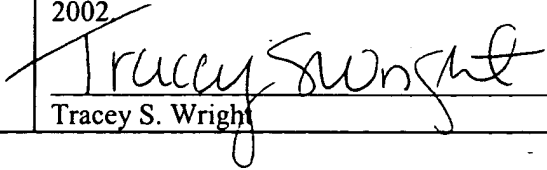
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**Version with Markings to Show Changes Made:**

Please amend Claim 1 as follows:

1. (Amended) A method for improving the flavor and aroma characters of a smoking article, comprising:

providing [a]an aqueous mixture consisting essentially of a reducing sugar and optionally a hydroxide of an alkali metal;

subjecting said mixture to heat treatment for a time and under conditions sufficient to produce a flavorful caramel composition;

applying said flavorful composition to a tobacco leaf or cut filler made thereof; and

preparing a smoking article comprising said tobacco leaf or cut filler.

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